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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/639,467

08/13/2003

Kaoru Usui

1614.1356

6110

21171 7590 12/31/2008
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EXAMINER

BOLDA, ERIC L

ART UNIT

PAPER NUMBER

3663

MAIL DATE

DELIVERY MODE

12/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/639,467	Applicant(s) USUI ET AL.	
	Examiner ERIC BOLDA	Art Unit 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 9-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 23, 2008 has been entered.

Response to Arguments

2. Applicant's arguments filed May 23, 2008 have been fully considered but they are not persuasive. Applicant argues **A (Remarks p. 6-7)** that the Kosaka reference does not disclose "the control unit controls the optical amplifying unit such that the gain of the total light power remains constant "; rather, that the difference between the input levels fed to the optical amplifier of the probe light beam and signal light beams can be mitigated. In response, the Examiner points out that while the probe light level appears to be held constant when applied to the input of the operation of the amplifier, the *gain* state of the amplifier for the *signal lights* at wavelengths $\lambda_1 - \lambda_4$ is kept constant by the controller (7th col. lines 36-43). The reference to maintaining an output at a predetermined value seems to assume that the input values of the signal lights are constant, even though the number of such signals may change (6th col. lines 22-27). The portion cited by Applicant (16th col. lines 45-63) refers to a non-dispersion shifted fiber (9) which is not part of the optical amplifier *per se*. Therefore, the rejections are

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maintained. Similar arguments were brought against the 103(a) rejection; as discussed above these arguments are not valid and the rejection is maintained.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 1-5, 9-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims contain the limitation "wherein the control unit controls the optical amplifying unit such that the gain of the total light power remains constant". The Examiner cannot find support for this limitation in previously filed claims, or in the specification. Applicant is respectfully asked to provide the page and line numbers of the original specification to support this limitation.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 14 and claims 15-18 dependent on it are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 19 recites the limitation " wherein the control unit controls the optical amplifying unit such that the gain

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of the total light power remains constant ". It is unclear which of the two optical amplifying units (first or second) previously mentioned in the claim are being referred to, as well as whether the gain refers to that of the first amplifier, the second amplifier, or both combined.

Claim Rejections - 35 USC § 102

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1,3-9, 11-14, and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kosaka (US 6,038,062 published Mar. 14, 2000).

With regard to claims 1,9, 14 and 19, Kosaka discloses a concatenation of amplifiers (fig. 9); further fig. 2 is an inset of each amplifier of fig. 9;

- a 1st optical amplifying unit (1st instance of #22.) amplifying an input light;
- a 2nd optical amplifying unit (2nd instance of #22.) amplifying an output light;
- a 1st input branching unit (#18) branching the input light;
- a 2nd input branching unit (#23) branching the output light;
- a 1st optical filter (#36) passing a specific wavelength of the branched input light;
- an 2nd optical filter (#26) passing a specific wavelength of the branched output light;
- a 1st specific wavelength (#37) measuring unit measuring power of filtered input light;
- a 2nd specific wavelength (#28) measuring unit measuring power of filtered output light;
- a total power measuring unit (#38 and #27) measuring the light power of

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the branched input light and the branched output light; and
a control unit (#33 and #29) controlling the optical amplifying units based
on the light power measured by the specific wavelength measuring units
and the total power measuring units.

With regard to claims 3-4, 11-12, and 16-17, note col. 10, lines 40-53.

With regard to claims 5, 13, and 18, the amplifiers are gain controlled via control of the pump
#21.

Claim Rejections - 35 USC § 103

9. Claims 2, 10, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Kosaka in view of Fujita (US 6,008,935 published Dec. 28, 1999).

Kosaka does not specifically disclose a variable wavelength optical filter. However, Fujita
teaches a variable wavelength optical filter for AGC based on a detected branched light (#40). It
would have been obvious to one of ordinary skill in the art at the time the invention was made to
use a variable wavelength optical filter for the advantage of isolating a specific channel in the
WDM signal.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the
Examiner should be directed to Eric Bolda whose telephone number is 571-272-8104.
The examiner can normally be reached on M-F from 8:30am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's
supervisor, Jack Keith, can be reached on 571-272-6878. Please note the fax phone
number for the organization where this application or proceeding is assigned is 571-
273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Eric Bolda/

Primary Examiner, Art Unit 3663